

PENDING CLAIMS

The following is a complete list of claims currently pending in the application. Claims 3, 5-8, 23, 25, 28, 29, 32, 33, and 40-42 are withdrawn. Please amend claims 9, 24, 26, and 36-38 as shown below.

1-2. (Cancelled)

3. (Withdrawn) A method for making a transistor containing a gate dielectric structure, comprising:

providing a gate conductor;

providing a channel; and

providing, between the gate conductor and the channel, an oxide layer of the gate dielectric structure by an in-situ steam generation process, wherein the transistor is a thin film transistor.

4. (Cancelled)

5. (Withdrawn) The method of claim 3, wherein the in-situ steam generation process is performed at a temperature ranging from about 600 to about 900 degrees Celsius.

6. (Withdrawn) The method of claim 3, wherein the in-situ steam generation process is performed at a pressure ranging from about 100 millitorr to about 760 torr.

7. (Withdrawn) The method of claim 3, wherein the in-situ steam generation process is performed for a time sufficient to deposit an oxide thickness of about 10 to about 200 angstroms.

8. (Withdrawn) The method of claim 28, further including annealing the oxide layer in a nitric oxide atmosphere.

9. (Currently amended) A method for making a SONOS device, comprising:

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providing a channel region;
providing a first oxide layer on the channel region by an in-situ steam generation process;
providing a silicon nitride layer on the first oxide layer; and
providing a second oxide layer on the silicon nitride layer, wherein the device is a SONOS device.

10-11. (Cancelled)

12. (Original) The method of claim 9, wherein the in-situ steam generation process is performed at a temperature ranging from about 750 to about 1050 degrees Celsius.

13. (Original) The method of claim 9, wherein the in-situ steam generation process is performed at a pressure ranging from about 100 millitorr to about 760 torr.

14. (Original) The method of claim 9, wherein the in-situ steam generation process is performed for a time sufficient to deposit an oxide thickness of about 10 to about 200 angstroms.

15. (Original) The method of claim 9, further including annealing the oxide layer in a nitric oxide atmosphere.

16-22. (Cancelled)

23. (Withdrawn) A thin film transistor containing a gate dielectric structure made by a method comprising:

providing a gate conductor;

providing a channel region; and

providing, between the gate conductor and the channel region, an oxide layer of the gate dielectric structure on the channel region by an in-situ steam generation process, wherein the transistor is a thin film transistor.

24. (Currently amended) A SONOS semiconductor device made by a method comprising:

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providing a channel region;
providing a first oxide layer on the channel region by an in-situ steam generation process;
providing a silicon nitride layer on the first oxide layer; and
providing a second oxide layer on the silicon nitride layer wherein the device is a SONOS semiconductor device.

25. (Withdrawn) An integrated circuit containing a thin film transistor with a gate dielectric structure made by a method comprising:

providing a gate conductor;
providing a channel; and
providing, between the gate conductor and the channel, an oxide layer of the gate dielectric structure by an in-situ steam generation process wherein the transistor is a thin film transistor.

26. (Currently amended) An integrated circuit containing a SONOS semiconductor device made by a method comprising:

providing a polysilicon layer;
providing a first oxide layer on the polysilicon layer by an in-situ steam generation process;
providing a silicon nitride layer on the first oxide layer; and
providing a second oxide layer on the silicon nitride layer wherein the device is a SONOS semiconductor device.

27. (Cancelled)

28. (Withdrawn) The method of claim 3, wherein the transistor is a SONOS transistor.

29. (Withdrawn) The method of claim 3, wherein the transistor comprises a floating gate.

30-31. (Cancelled)

32. (Withdrawn) The transistor of claim 23, wherein the transistor comprises a floating gate.

33. (Withdrawn) The integrated circuit of claim 25, wherein the transistor comprises a floating gate.

34-35. (Cancelled)

36. (Currently amended) A method for making a SONOS device, comprising:

providing a polysilicon channel region;

providing a first oxide layer in contact with the polysilicon channel region by an in-situ steam generation process;

providing a silicon nitride layer in contact with the first oxide layer; and

providing a second oxide layer in contact with the silicon nitride layer.

37. (Currently amended) A SONOS semiconductor device made by a method comprising:

providing a polysilicon channel region;

providing a first oxide layer in contact with the polysilicon channel region by an in-situ steam generation process;

providing a silicon nitride layer in contact with the first oxide layer; and

providing a second oxide layer in contact with the silicon nitride layer.

38. (Currently amended) An integrated circuit containing a SONOS semiconductor device made by a method comprising:

providing a polysilicon layer;

providing a first oxide layer in contact with the polysilicon layer by an in-situ steam generation process;

providing a silicon nitride layer in contact with the first oxide layer; and

providing a second oxide layer in contact with the silicon nitride layer, wherein the device is a SONOS semiconductor device.

39. (Cancelled)

40. (Withdrawn) A method for making a gate dielectric structure for a thin film transistor, comprising:

providing a gate conductor;

providing a channel region; and

providing, between the gate conductor and the channel region and in contact with the channel region, an oxide layer of a gate dielectric structure by an in-situ steam generation process performed at a temperature ranging from about 600 to about 1050 degrees Celsius, a pressure ranging from about 100 millitorr to about 760 torr, and for a time sufficient to deposit an oxide thickness of about 10 to about 200 angstroms, wherein the gate dielectric structure is for a thin film transistor.

41. (Withdrawn) A thin film transistor containing a gate dielectric structure made by a method comprising:

providing a gate conductor;

providing a channel region; and

providing, between the gate conductor and the channel region and in contact with the channel region, an oxide layer of the gate dielectric structure on the channel region by an in-situ steam generation process, wherein the transistor is a thin film transistor.

42. (Withdrawn) An integrated circuit containing a thin film transistor with a gate dielectric structure made by a method comprising:

providing a gate conductor;

providing a channel; and

providing, between the gate conductor and the channel and in contact with the channel, an oxide layer of the gate dielectric structure by an in-situ steam generation process, wherein the transistor is a thin film transistor.

CLAIM AMENDMENTS: DISCUSSION

Claims 9, 24, 26, and 36-38 are amended in this response. None of these amendments introduces new matter.

All of these claims are amended to specify formation of a silicon nitride layer. Support for these claim amendments can be found in paragraphs [0005] and [0019] of the specification.